The American
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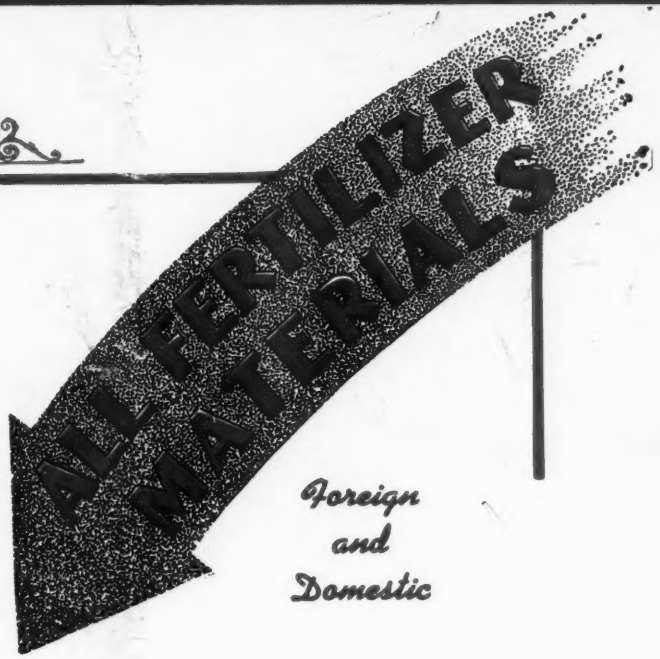

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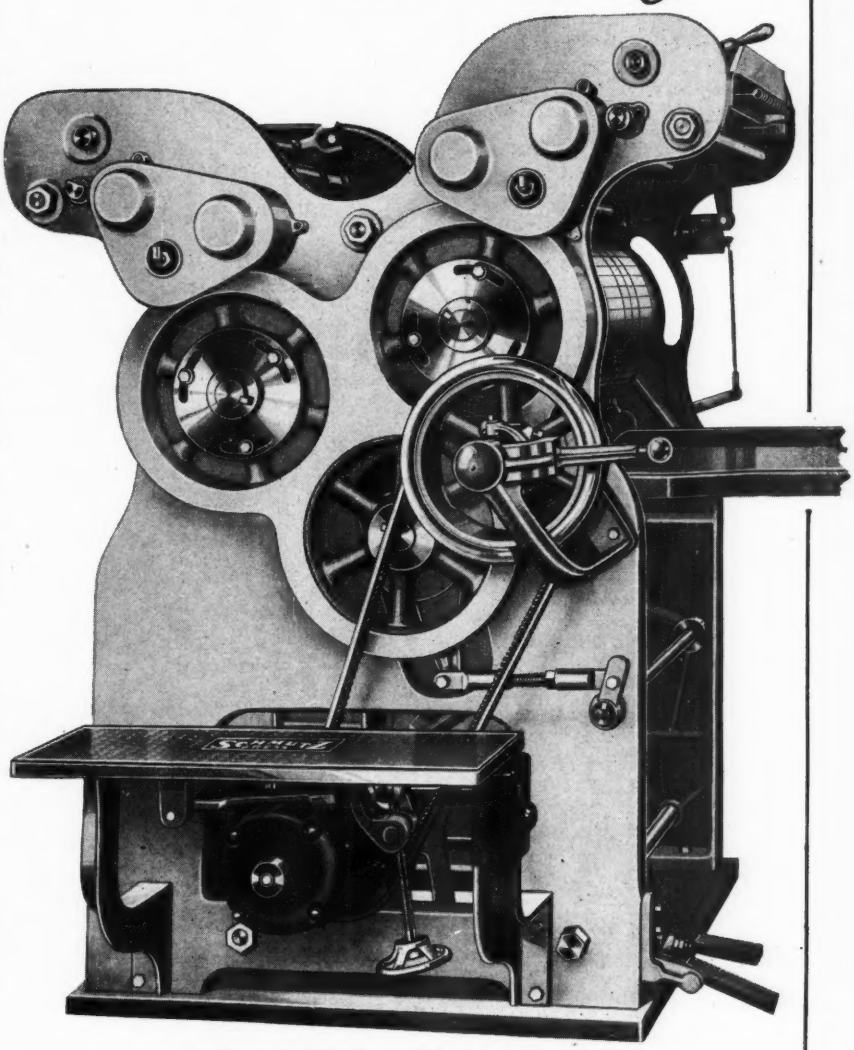

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The American FERTILIZER

Vol. 109 NOVEMBER 27, 1948 No. 11

N. F. A. Fall Meeting

Large Attendance Hears Discussion of Timely Fertilizer Topics. Industry Greet New N. F. A. President. New Association Film Given Premiere Showing

WITH the shortage of fertilizer nitrogen as the only serious problem in prospect for the coming season, a representative group of more than 400 fertilizer executives and agricultural officials met at the Hotel Biltmore, Atlanta, Ga. on November 15th, 16th and 17th, for the 22nd and Fall meeting of the National Fertilizer Association. A very timely and comprehensive program had been prepared for the two general sessions, which covered various phases of fertilizer usage, as well as such problems as increased production, broadening markets, the labor situation. The meetings were well attended and the addresses were warmly received.

This convention gave the industry an opportunity to welcome the association's new president, Dr. Russell Coleman, whose talk on fertilizer markets showed his thorough familiarity with the problems of the industry.

An added feature of the first day's program was the first showing of the N. F. A. new sound and color film, "What's in the Bag," which tells about the contents of a bag of fertilizer and how they get there. Copies of this film will be ready for distribution in the near future.

The annual dinner on Tuesday, November 16th was an enjoyable affair. C. T. Prindeville, vice-chairman of the Board of Directors, presided and an excellent entertainment program was arranged by the hospitality committee. This committee consisting of Chairman J. Rucker McCarty, W. L. Baughcum, L. D. Hand, Morton S. Hodgson, George W. McCarty, J. J. Moore, J. W. Rutland and A. L. Wiley, did a very fine job throughout the convention in seeing that everybody felt "right at home."

On Monday evening, the Ashcraft-Wilkinson Company was host at a barbecue at the Druid Hills Country Club. The feature of the entertainment was a take-off on current radio programs, entitled "Cut Out the Music" with prizes to participants selected from the audience. Emory Cocke was the versatile master of ceremonies.

Meeting of Tuesday, November 16th

The opening session on Tuesday morning was in charge of Ray King, chairman of the Board of Directors. Mr. King reviewed the fertilizer situation and the various activities of the association. His address is printed in full in this issue.

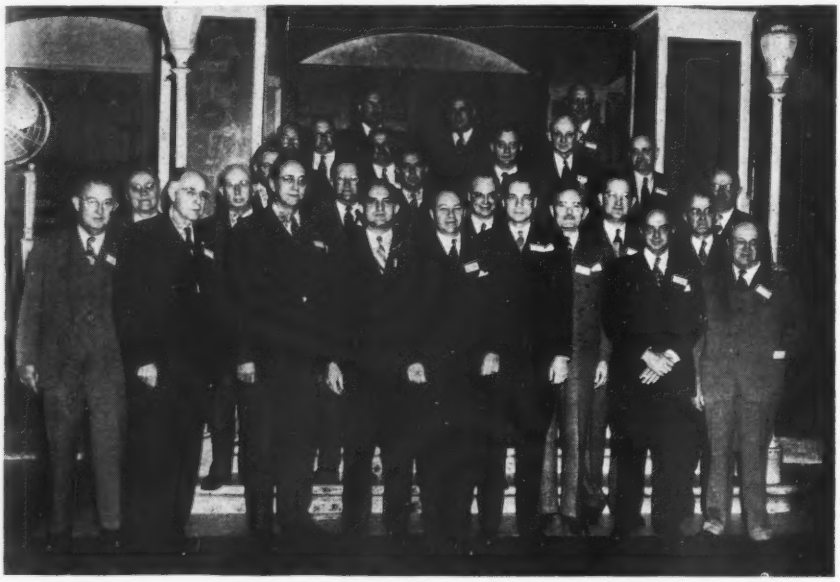
Clem D. Johnston, president of Roanoke Public Warehouse, Roanoke, Va., spoke on the topic "Increased Production—Master Weapon in the Fight for Freedom." He believes that by developing a more abundant production in this country, the prestige of the United States can be made so great as to make this country prevail in the clash of American and Soviet ideologies; also, it must be the tool by which the United States endeavors to make Europe self-sufficient and self-reliant. Socialism and Communism will not work because of the lack of the incentive motive. "Let's undertake to aid in the restoration of the European economy on an industry-to-industry basis, instead of the present government-to-government approach. I believe

that our best chance, perhaps our only chance of success, lies in working directly with the individual industries."

The next speaker was F. H. Leavitt, of the Agricultural Department, Shell Chemical Corp., San Francisco, Cal. Using colored slides to illustrate his remarks, Mr. Leavitt showed how direct application of anhydrous ammonia, by such methods as nitrogation and nitrojection, and the practice of soil fumigation have been found effective on a wide variety of crops in California, particularly in the Imperial Valley. This type of soil-conditioning service requires a substantial investment of capital for equipment such as high-pressure tankcars, storage tanks and cylinders.

The closing address was given by Ray M. Suter, director of industrial relations of the Ohio Chamber of Commerce, Columbus, Ohio. According to Mr. Suter, "Upon the wisdom of management, labor and government depends the successful solution of our labor problems of tomorrow." The migration of industry westward and southward is leading to the same labor problems and difficulties in those areas that have heretofore confronted employers in other industrialized sections. Hence, unions are working for nationally uniform scales of wages, schedules of hours, and systems of work rules.

The influence of women in labor problems cannot be over-emphasized since they constitute 28 out of every 100 workers. The views of women do not always parallel those of union leaders. The loyalty of a great majority of union members is primarily loyalty toward the union, not toward management. Although organized labor does not present an entirely united front, its strength increases as the number of organized workers continues to grow. The Government's attitude will have great influence on the labor problems of the future, and the immediate possibility is that the Taft-Hartley Act will be "softened."



The Officers and Directors of the National Fertilizer Association Meeting at the Fall Convention in Atlanta, Ga., November 15-17, 1948

Meeting of Wednesday, November 17th

Chairman Ray King presided at the second general session and presented as the first speaker, Dr. Russell Coleman, the Association's new president. Dr. Coleman's address "Broadening the Fertilizer Market" will be found elsewhere in this issue.

Dr. Firman E. Bear, head of the Soils Department, Rutgers University, New Brunswick, N. J. took as his subject "The Test of Time." He showed that factual evidence refutes the theory that chemical fertilizers ruin the soil and consequently injure human health. For instance, records of an experiment in Rothamsted, England, extending

(Continued on page 20)

The Fertilizer Situation*

By RAY KING

Chairman, Board of Directors, The National Fertilizer Association

THIS is my first appearance before the members of The National Fertilizer Association as chairman of the Board of Directors, and I want to express my appreciation of the honor and distinction conferred upon me. I realize that this job is more than an honor—it carries with it continuing responsibility and a mandate for active application to duty. I accept the assignment with humility of spirit and shall try to emulate the worthy example of consecration to duty and efficiency set by my predecessor, Weller Noble. I doubt if many of you realize the time and effort expended by Weller Noble in the past two years as chairman of the Board. Trip after trip he made from the Pacific Coast in the Association's interest. At one time his health was seriously impaired but I am glad to say that he has fully recovered. The present status of Association affairs stands as witness to the grand job he has done. The members owe him a deep debt of gratitude as well as one to his immediate predecessors, Maurice Lockwood and Harry Baylor. They all did grand jobs.

Speaking for myself, I know that alone I can accomplish nothing. But I also know that through the continued cooperation of the members of the Association, the Directors and the staff, our Association can and will keep moving—steadily and forward. We have a great record in the past; we are looking toward even greater accomplishments in the future. I earnestly bespeak a continuation of the same splendid teamwork and support which you have heretofore given to our officers and staff.

Tomorrow I will tell you something about our new president and you will hear him deliver his own message. He has a record as a capable administrator and executive and we are fortunate in securing his services. At the moment I merely want to present to you our new president, Dr. Russell Coleman, who assumed his duties on November 1 and to whom we all extend a most cordial welcome.

*Presented at the 22nd Fall Meeting, The National Fertilizer Association, Atlanta, Ga., November 17, 1948.

While the Association takes no position as to personalities in politics, I feel that I would be remiss if I did not refer briefly to results of the recent election in their possible relation to the fertilizer industry. Presumably this election will mean a continuance of overall policies that have been followed, with slight interruption, by our national government for the past sixteen years. It may be the signal for efforts to enact legislation that will seriously affect American business. Commonly spoken of as possibilities are production controls, allocation of scarce materials, price controls, re-imposition of wartime excess profits tax, increase of personal income taxes, and repeal of the Taft-Hartley law. Of peculiar importance to our own industry is the possibility of legislation to put the Government further into the business of producing and distributing fertilizer in competition with private enterprise.

Eternal vigilance is the price of liberty. It behooves all of us to be on the alert in matters that will affect our business and to continue our efforts to induce our Senators and Congressmen to deal with vital matters such as I have mentioned in a long-view, constructive manner.

Superphosphate and Potash

The fertilizer materials situation has bright and dark spots. Between 185 and 190 superphosphate plants are now in operation as compared with 156 plants reported by the U. S. Department of Agriculture in 1942. In spite of curtailed production in some plants due to inability to obtain nitrogen solutions, it is now estimated that the production of superphosphate for this year will be nearly 11,000,000 tons, an increase of about 6 per cent over last year.

Potash production also is estimated to be somewhat greater than last year, deliveries so far this year reaching a new peak, approximately 2 per cent above last year.

Nitrogen

The most difficult aspect of the fertilizer materials situation in the immediate present

relates to nitrogen. At the beginning of the current fertilizer year, the U. S. Department of Agriculture estimated that 902,000 short tons of fertilizer nitrogen in all forms of material would be available to American farmers during this year, referring to this amount as being about 10 per cent greater than the preceding year's consumption of 817,000 tons.

It now appears from more recent production reports that last year's consumption reached approximately 850,000 tons and that the estimate of agricultural nitrogen available for the current year has been increased to about 925,000 tons. On the basis of these figures, this year's total nitrogen supply would seem to be about 8 per cent greater than last year's, rather than 10 per cent greater. These are overall figures, and even if the estimate for this year should be realized it does not follow that all sections of the country will get an increase. In fact, it seems now that certain areas, particularly the Southeast and New England, will definitely get even less nitrogen than they had last year.

It must be borne in mind, too, that for one reason or another it is quite possible that the estimated production for the current year will not be realized. At least three factors have already, during the first four months of the year, curtailed nitrogen production: namely, strikes, conversion of facilities to production of methanol, and plant breakdowns. The Pacific Coast has suffered seriously from maritime strikes. Cargoes of nitrogen-bearing materials could not be unloaded and nitrate ships were not permitted to sail from Chile to Pacific Coast ports pending settlement of these strikes. It would not be surprising if this year's supply should be only slightly in excess of last year's—probably not more than 2 per cent or 3 per cent.

Increased production of nitrogen next year seems now assured through enlargements, already announced, of existing plants. Entirely new plants are also in prospect.

However, one potentially adverse factor in next year's outlook deserves special notice. We have heard, from sources which have heretofore proved to be reliable, that the Army is planning to increase its shipments of nitrogen to U. S.-occupied areas next year. This projected increase is of such magnitude that to bring it about would not only require all the nitrogen that the Ordnance plants can make plus the entire output of one plant whose production is subject to Army option, but would also necessitate the commandeering of a substantial tonnage of our commercial production. This, of course, would result in a reduction of the nitrogen that would be available to American farmers.

Every member of the fertilizer industry knows how pitifully inadequate is the present supply of domestic nitrogen. It is unthinkable that this supply should be further curtailed in order to increase shipments to occupied countries whose ability to take care of their own needs, we have been told, would increase as the war years receded, which should consequently result in a progressive decrease in the tonnage of nitrogen to be shipped to those countries.

I consider it imperative that every member of The National Fertilizer Association should immediately get in touch with his respective Senators and Congressmen and advise them of this potential action so that they will be alert to protect the interests of the American farmers by insisting that the nitrogen shipped to U. S.-occupied countries not be increased above the tonnage shipped during each of the preceding two years. On the contrary these shipments should be *decreased*.

(Shortly after the Convention, the Army stated that its plans "do not include any purchase whatever of nitrogen fertilizer from commercial sources in the United States." —ED.)

The manufacturing problems of the industry have been greatly complicated during the last few months by the nitrogen situation. In many instances, superphosphate could not be moved because sufficient nitrogen solutions could not be obtained to enable mixed goods or bases to be laid down. It is reported that a number of superphosphate plants were forced to reduce their rate of production, and others even to close down, for this reason. Substitute forms of nitrogen, even if obtainable, would result in goods of less satisfactory mechanical condition. Superphosphate tonnage so lost can seldom be regained later by more intensive operation. I believe that in very few instances have manufacturers been able to obtain sufficient quantities of the forms of nitrogen most suitable to their needs. The use of substitute forms presents formulation and manufacturing difficulties that are hard to overcome.

Plant Food Content

Not only has the tonnage of our industry's products increased year by year during the last ten years, but there has also been an increase in the average plant food content. There is room for additional increase. Until the average plant food content of our pro-

(Continued on page 22)

Broadening The Fertilizer Market*

By RUSSELL COLEMAN

President of The National Fertilizer Association

PERHAPS the subject which I have chosen is largely of academic interest to you at the present moment, for during the past few years your problem has been how to supply the needed fertilizer, not how to obtain a broader market. The industry has met this problem admirably, but as production approaches demand, the industry must be alert to new and broader markets in the fertilizer field.

The recent and extremely rapid increase in fertilizer consumption in this country is unparalleled in our history. As you recall, fertilizer consumption in the United States first exceeded seven million tons in 1914; this was followed by fluctuations from year to year; and it was not until 1929 that consumption exceeded eight million tons; thus, 15 years were required for a million-ton increase. Again there were fluctuations from year to year, but the trend was upward and the total of nine million tons was reached in the year 1941. Twelve years were required to increase consumption from eight to nine million tons, and twenty-seven years from seven to nine million tons, and twenty-seven years from seven to nine million tons.

Since 1941 gains have averaged approximately one million tons a year—consumption having gone from eleven million tons in 1943 to fifteen million tons in 1947. Actually, fertilizer consumption is now more than double the average for the five-year period, 1935-1939.

I think leaders of the industry are justified in asking, "Where do we go from here?" Is this achievement just another war effort? Are conditions doomed to revert to prewar standards? Will consumption be maintained at present levels or will production and domestic consumption be further advanced?

American agriculture is experiencing several basic and significant changes which represent broad principles affecting the fertilizer industry. In these changes, which are not merely associated with wartime and postwar demand, may lie the partial answer to our question: What does the future hold for the fertilizer industry?

There has been a definite shift in the usage of fertilizers by the several geographical areas in our country. You will recall that the fertilizer industry was originally established along the Eastern Seaboard, and that it has progressed westward. This trend has been accentuated during recent years. The Western and mid-Western areas, which used only 16 per cent of the fertilizer consumed in the United States during the 1935–1939 period, used 30 per cent of United States fertilizer in 1947. Impressive though they may be, these percentage figures do not adequately present the large increase in fertilizer consumption in these areas. Actually, the consumption was 1,141,000 tons in the prewar years and 4,487,000 tons in 1947, a tonnage increase of about 300 per cent. In a quarter of a century, fertilizer consumption has been increased 25-fold in Wisconsin, 23-fold in Minnesota, and 66-fold in Iowa.

In the Western States, fertilizer consumption has increased from 87,000 tons in 1923 to almost a million tons in 1947, an increase of more than 10 times.

Although the general increase in fertilizer usage throughout the United States may be largely due to the high level of farm prices, the larger increase for the Western and Midwestern regions represents a realization of the need for fertilizer for soils previously thought well supplied with plant food. Certainly the plant-food deficiencies on these soils have been increased through the removal of more and more plant food by higher-producing, better quality crops. The higher-yielding hybrid corn, for example, has speeded up the removal of plant food and has necessitated the increased use of fertilizers. Improved techniques in farming and in better methods of irrigation in the Western region have eliminated many of the factors which previously restricted crop production, and have thus accentuated the need for a larger use of fertilizers.

(Continued on page 26)

*Presented at the 22nd Fall Meeting of the National Fertilizer Association, November 17 1948, at the Atlanta Biltmore Hotel, Atlanta, Ga.

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Vol. 109 NOVEMBER 27, 1948 No. 11

Principal Articles in This Issue

PAGE

N. F. A. FALL MEETING 7
THE FERTILIZER SITUATION, *by Ray King* 9
BROADENING THE FERTILIZER MARKET, *by Russell Coleman* 11
Radioactive Materials Give Crops No Benefit, First Tests Indicate 12
McCormack to Head P. M. A. Agricultural Conservation Programs Branch . 13
English Fertilizer Society Discusses T. V. A. Phosphates 13
International Opens New District Potash Sales Office 13
October Tax Tag Sales 14
FERTILIZER MATERIALS MARKET
New York 15
Philadelphia 16
Charleston 16
Chicago 18
Multiwall Bags Prove Efficiency in Ship Fire 20

Radioactive Materials Give Crops No Benefit, First Tests Indicate

Experiments with certain low level radioactive materials, conducted during the 1948 crop year in 14 States and with 18 crops, so far have not shown any beneficial effect upon either crop growth or quality. The detailed results of those comprehensive tests will be announced at an early date.

The experiments were the first to be made under a special 2-year study to be carried on by the U. S. Department of Agriculture and cooperating agricultural experiment stations. The studies were undertaken in March of this year at the request of the Atomic Energy Commission in order to determine the effects of radio-activity upon plant growth. The Commission is financing the work.

The materials used to apply radioactivity were a commercial radioactive product and radium. The first of those was applied at three different rates with 10 replications (repeated 10 times) in the various field tests—to insure dependable results. The other was applied in only one concentration, comparable to the medium concentration of the commercial material but with the same replication.

The States where the field experiments were conducted in cooperation with the State agricultural experiment station, along with the crops on which the radioactive materials were tried, were as follows:

Arkansas, sweet potatoes
Georgia, cotton
Illinois, corn, soybeans, oats, and alfalfa
Kentucky, tomatoes
Michigan, navy beans, table beans, and spinach
Mississippi, corn
Montana, potatoes
North Carolina, tobacco and peanuts
Ohio, ladino clover
New York, carrots and potatoes
North Dakota, wheat and barley
Washington, sugar beets, field beans, and wheat
West Virginia, corn

In addition, experiments with tomatoes and turnips were conducted at the Plant Industry Station, Beltsville, Md.

These widespread one-season field experiments indicate strongly that the farmer cannot expect increased yields from money invested in radioactive materials. The question of possible stimulation of crops through use of radioactive chemicals will be investigated for another year.

The scientists carrying on these tests caution against confusing this study with the use of radioactive isotopes as tracers in the study of soils, fertilizers, and the nutrition of plants. As a research tool, radioactive isotopes are proving valuable, they say, but they admit they have still to find any evidence that radioactive materials stimulate plant growth.

McCormack to Head PMA Agricultural Conservation Programs Branch

Appointment of Alvin V. McCormack of Lewiston, Idaho, as Director of the Agricultural Conservation Programs Branch, Production and Marketing Administration, has been announced by Ralph S. Trigg, PMA Administrator. This position was held by Albert J. Loveland before his appointment as Under Secretary of Agriculture. Since that time, W. B. Crawley, PMA Assistant Administrator for Production, has been acting as Director of the Branch.

As head of the ACP Branch, Mr. McCormack will be responsible for coordinating the planning and administration of the Agricultural Conservation Program. This program is carried out on three million farms, which include nearly two-thirds of the crop land of the United States, through the elected community and county farmer committee system.

Mr. McCormack has devoted his entire life to agricultural production and management work. He is the owner-operator of a large general farm in Idaho. In addition to his direct production experience, Mr. McCormack has broad background in marketing and business organization work, including: member, Lewiston (Idaho) Grain Growers Association; member Board of Directors, Washington-Idaho Wheat League; member Cooperative Grange Supply; member local School Board; member Highway District Board; and Assistant to the Director, Commodity Credit Corporation, at Portland, Oregon.

Since 1933, Mr. McCormack has served almost continuously in the farmer committee system which has administered farm programs in Idaho. He started as Chairman of the Nez Perce County Committee, and later served as a Crop Loan Specialist and as a Farmer Fieldman for the State Office. Mr. McCormack was first appointed to the Idaho State PMA Committee in 1939. In recent years he has served as Chairman of this State Committee, the position he leaves to accept his new appointment in Washington, D. C.

Born in Idaho and raised on a farm in that state, Mr. McCormack graduated in agriculture at the University of Idaho in 1918. He served in the Navy during the first World War.

English Fertilizer Society Discusses T. V. A. Phosphates

The Fertilizer Society of London, England, at their regular meeting on October 20th, featured papers by A. E. Sell and E. P. Hudson on "Tennessee Valley Authority's Activities and Their Bearing on Phosphatic Fertilizer Technology. The former reviewed the general scope of TVA work and development, while the latter discussed the technical side of the fertilizer phosphates produced.

The preliminary process reduces phosphate rock to elemental phosphorus in the electric furnace, and this material is later burned in air to form phosphorus pentoxide. The conversion of phosphorus pentoxide to concentrated superphosphate (45/48 per cent available P_2O_5) and to calcium metaphosphate (67/67 per cent available P_2O_5) was described. Another product discussed was fused tri-calcium phosphate (28% total P_2O_5).

Of special comment was the production of elemental phosphorus by techniques which permit its separation in form suitable for rail transportation in bulk. This might become of significance in developing the large phosphate reserves in the western states.

International Opens New District Potash Sales Office

International Minerals & Chemical Corporation has established a new district sales office for its Potash Division at Shreveport, La., under the supervision of Henry C. Aaron, district manager.

The district will comprise Texas, New Mexico, Oklahoma, Louisiana, Arkansas, Mississippi, and the western portion of Tennessee. Mr. Aaron had served as a resident salesman for that area during the past five years under the supervision of the Atlanta, Ga., district office. Under the new arrangements, Mr. Aaron will operate directly under John W. Rutland, general sales manager for the Potash Division at the general offices in Chicago. The International potash mine and refinery is located at Carlsbad, N. M.

October Tax Tag Sales

Sales of fertilizer tax tags during October were equivalent to 528,000 short tons. Such sales, which are based on reports to The National Fertilizer Association from State control officials in the 14 States requiring fertilizer tax tags, were nine per cent above the 485,000 tons reported for a year ago, but three per cent below the 544,000 tons indicated for October 1946. Sales during October fell nine per cent from the preceding month, while sales last October were 12 per cent greater than for September 1947.

The ten Southern States, with total October sales of 455,000 tons, showed a 13 per cent increase over the 404,000 tons reported for a year ago, but those sales were seven per cent below the 489,000 tons indicated for October 1946. In relation to tax sales in all 14 States for the month, sales in the ten Southern States represented 86 per cent, compared with 83 per cent last year. Compared with last October, sales were higher in six of the States, with the tonnage increases ranging from 5,500 for Texas to 37,100 for Georgia. The remaining four States reported decreases, with that for Florida being the greatest.

Sales in the four Midwestern States, which were equivalent to 73,000 tons, were nine per cent below the 81,000 tons indicated for last October, but 35 per cent above those for two years ago. Compared with October 1947, sales in Missouri were substantially higher, but decreases were noted for the other three States. For Indiana, the decrease was 22,500 tons, and for Kentucky 11,400 tons.

January-October sales in the 14 States were equivalent to 7,930,000 short tons, an increase of 12 per cent over the 7,110,000 tons reported for the same period last year.

(Continued on page 20)

FERTILIZER TAX TAG SALES

States	October				January-October		
	1948 Tons	1947 Tons	1946 Tons	% of 1947	1948 Tons	1947 Tons	1946 Tons
Virginia	39,602	48,766	48,942	99	583,729	590,320	596,220
N. Carolina	122,135	97,115	88,321	98	1,323,230	1,347,834	1,370,372
S. Carolina	65,010	75,200	56,985	102	780,470	762,689	781,020
Georgia	60,096	23,042	71,970	109	1,052,649	964,861	1,018,159
Florida	60,206	97,736	130,056	85	571,175	673,033	854,288
Alabama	27,880	10,800	33,500	138	861,797	622,300	766,050
Tennessee	26,656	8,027	26,940	124	379,924	307,098	304,634
Arkansas	13,883	6,411	4,500	145	212,795	146,279	141,550
Texas	36,161	30,703	26,251	119	413,837	347,748	314,083
Oklahoma	3,250	6,000	1,960	157	116,986	74,432	50,936
Total South	454,879	403,800	489,425	108	6,296,592	5,836,594	6,197,312
Indiana	21,100	43,635	19,875	115	682,400	591,640	511,617
Kentucky	17,307	28,675	13,650	129	454,335	352,395	291,641
Missouri	33,734	5,575	14,219	172	388,883	225,736	251,978
Kansas	1,325	3,040	6,875	103	107,678	104,058	58,863
Total Midwest	73,466	80,925	54,619	128	1,633,296	1,273,829	1,114,099
Grand Total	528,345	484,725	544,044	112	7,929,888	7,110,423	7,311,411

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FERTILIZER MATERIALS MARKET

NEW YORK

Chemical Nitrogen Supplies Show No Improvement. Prices on Organics Advance with Increasing Feed Market Demand. Maritime Strike Affects Some Imports. Superphosphate Supplies Adequate. Potash Shipments Reported on Schedule

Exclusive Correspondence to "The American Fertilizer"

NEW YORK, November 24, 1948.

Organics

Packing house by-products continued their upward trend of recent weeks, due to the continued strong demand from the feed trade and lack of supplies. Present prices are too high for the fertilizer trade, who have been forced to use substitute materials. Blood sold at $9.25 per unit of ammonia ($10.94 per unit N), f.o.b. eastern shipping points, with tankage selling at the same price for prompt shipment. Vegetable meals continued their advance because of renewed buying by the feed trade and some mills are now sold out for 60 to 90 days and unable to make any offerings until February. Linseed meal sold at $71.00 per ton and soybean meal sold at $75.00 per ton, f.o.b. midwest production points.

Sulphate of Ammonia

There is considerable demand for this material from various sections of the country and a number of inquiries in the market for export. No change in current prices are reported.

Nitrate of Soda

Fears that the imported material may temporarily be shut off, due to the maritime strike, were expressed in some quarters as stocks at various ports are low and the continuance of the strike is bound to delay shipments.

Nitrogen Solutions

This situation still remained critical for most buyers who find themselves drastically short of supplies, having been cut in their allotments for the second half of the year. No nearby relief is looked for.

Nitrogenous Tankage

Supplies seem to be ample at the present time to cover the demand and no price changes are heard of. Shipments are going forward against contracts.

Castor Pomace

Should the maritime strike continue on the East Coast, some producers of this material may have to close down as their raw material comes from Brazil. Shipments are going forward on contract.

Fishmeal

Some material was offered at around $132.00 per ton, f.o.b. fish factories, with fertilizer trade showing little interest, but the feed trade is buying as they need the material. Stocks in producers' hands are reported low.

Bone Meal

This material was practically unobtainable for quick shipment as the bulk of the production is going to the feed trade, leaving very little for fertilizer buyers. Some producers sold up for the next 60 or 90 days.

Hoof Meal

Few sales of this material were reported but the market was said to be firm at around $7.00 per unit of ammonia ($8.51 per unit N), f.o.b. production points.

Superphosphate

Supplies at some production centers seem to be fairly large but it is thought as soon as the heavy shipping season gets under way, these supplies will dwindle. It is reported the U. S. Government has placed further contracts for substantial tonnage to be exported under the European Relief program which should cut down stocks considerably. Triple superphosphate remains in demand.

Potash

Producers are still shipping against contracts but most buyers need more than they have contracted for. No further reports were heard of foreign material coming into the country.

PHILADELPHIA

Nitrogen Shortage Continues. Cyanamid Prices Advance. Superphosphate in Greater Demand with Supplies Adequate

Exclusive Correspondence to "The American Fertilizer"

PHILADELPHIA, November 22, 1948.

Solid forms of chemical nitrogen continue to be in much greater demand than supply, and it is greatly feared that the American farmers will not get as much nitrogen fertilizer as they want. Organics are much stronger and in not very abundant supply.

Sulphate of Ammonia.—Production is reduced and mostly under contract; and entirely insufficient to meet requirements. There is no resale material offering.

Nitrate of Soda.—The buying situation remains extremely tight, and the present strike of dock workers is bound to have a detrimental effect on the Chilean supply.

Ammonium Nitrate.—This continues in greater demand than can be furnished, and production is reported reduced.

Cyanamid.—Advance in price is reported, to become effective November 29. This is $5.00 per ton on the direct application form, and 30 cents per unit of nitrogen per ton on the other grades. And, as previously reported, contract tonnages are likely to be reduced about 35 per cent.

Castor Pomace.—No offerings are in evidence, and present production is all under contract.

Blood, Tankage, Bone.—Organics are much stronger, due to increased feeding demand and limited production. Blood is quoted at $9.00 per unit of ammonia ($10.94 per unit N), with tankage at $8.50 to $8.75 per unit ($10.33 to $10.63 per unit N). Bone meal is practically out of the market.

Fish Scrap.—Menhaden 60 per cent protein meal is quoted at $130.00 per ton, with scrap at $125.00, and offerings limited.

Phosphate Rock. — Production continues steadily and is beginning to exceed the demand.

Superphosphate.—Increased demand is being met without difficulty, but a shortage of sulphuric acid is reported in some sections, and if this continues it is feared it will be reflected in reduced production. No price changes are reported.

Potash.—Present domestic production is still not enough to meet requirements, although imports to date exceed last year.

CHARLESTON

Increased Production of All Principal Materials Expected During 1949 but Demand Will Be Even Greater

Exclusive Correspondence to "The American Fertilizer"

CHARLESTON, November 22, 1948.

It is estimated that the supply of agricultural nitrogen for the fertilizer year 1948-1949 will be only about 2 to 3 per cent greater than the previous year. Superphosphate is expected to be produced this season amounting to eleven million tons, or 6 per cent greater than last year. Supply of potash is estimated to be 9 per cent greater than last year and movement is heavy at present, though insufficient to satisfy all manufacturers.

Organics.—Demand for organics on the part of the fertilizer trade continues quiet. Domestic nitrogenous can be obtained at $3.50 to $4.00 per unit of ammonia ($4.25 to $4.86 per unit N), f.o.b. works, depending on the location of the production point.

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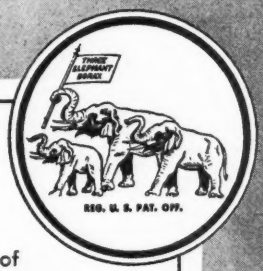

Agricultural authorities have shown that a lack of Boron in the soil can result in deficiency diseases which seriously impair the yield and quality of crops. When Boron deficiencies are found, follow the recommendations of your local County Agent or State Experimental Stations.

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South American organics continue too high in price to interest domestic buyers.

Castor Pomace.—The market is nominally at $27.50 to $30.00 per ton, in bags, f.o.b. producers' works in the northeast and movement is mainly against current contracts.

Dried Ground Blood.—The market at Chicago is around $8.75 to $9.00 per unit of ammonia ($10.63 to $10.94 per unit N) in bulk. Little is being offered and the market is in the doldrums. The New York market is approximately $9.25 per unit of ammonia ($11.24 per unit N).

Cyanamid.—It is reported that the price of cyanamid has been increased recently 30 cents per unit of nitrogen. Demand is strong and shipments are somewhat behind schedule.

Potash.—Potash shipments are reaching a new peak approximately 9 per cent above last year. Demand continues strong with no change in prices reported.

Phosphate Rock.—Movement to acidulators is steady with the mines having no difficulty in meeting the call, even though some mines are operating on a five-day week.

Superphosphate. — The market continues rather firm, due to small mixers drawing on their contracts and also because of recent contracts purchased by the Government. Stocks, however, continue plentiful. Expected production this year will be eleven million tons, a 6 per cent increase over last year.

Sulphate of Ammonia.—Demand continues greater than supply and easement in this situation is not expected in the near future. It is reported that four large producers will establish plants in the southwest in the next year or two but the effect of these plants will probably not be felt until late 1949.

Ammonium Nitrate.—The price of ammonium nitrate, domestic production, ranges from $56.50 to $58.00 per ton in paper bags, f.o.b. production plant, depending on the producer. Demand is excessive, creating resales with considerable mark up.

Nitrogen Solutions.—Breakdowns at plants during the present calendar year and conversion of facilities to methanol continue to curtail the quantity available to fertilizer mixers. Demand continues in excess of supply.

CHICAGO

Organics Market Steady with Buying for Nearby Shipment. Higher Asking Prices Reported

Exclusive Correspondence to "The American Fertilizer"

CHICAGO, November 22, 1948.

The market on animal ammoniates in the middle west remains in a strong position although buying interest is still limited to material available for nearby shipment. For this reason, volume of trading is rather narrow and asking prices are held at levels higer than those previously paid.

Meat scraps, ground and sacked, 50 per cent protein, are moving at $105 to $110 per ton. Digester tankage, 60 per cent protein, also ground and sacked range from $115 to $120 per ton. Dry rendered tankage is moving in moderate quantites at $1.80 to $1.85 per unit of protein. Wet rendered tanage ranges from $8.50 to $9.00 per unit of ammonia ($10.33 to $10.94 per unit N), and dried blood $8.75 to $9.00 per unit of ammonia ($10.63 to $10.94 per unit N). Bone meal is quoted at $65 to $70 per ton for steamed product, 65 per cent B.P.L., and $65 per ton for raw bone meal, 4½ per cent ammonia and 45 per cent B.P.L.

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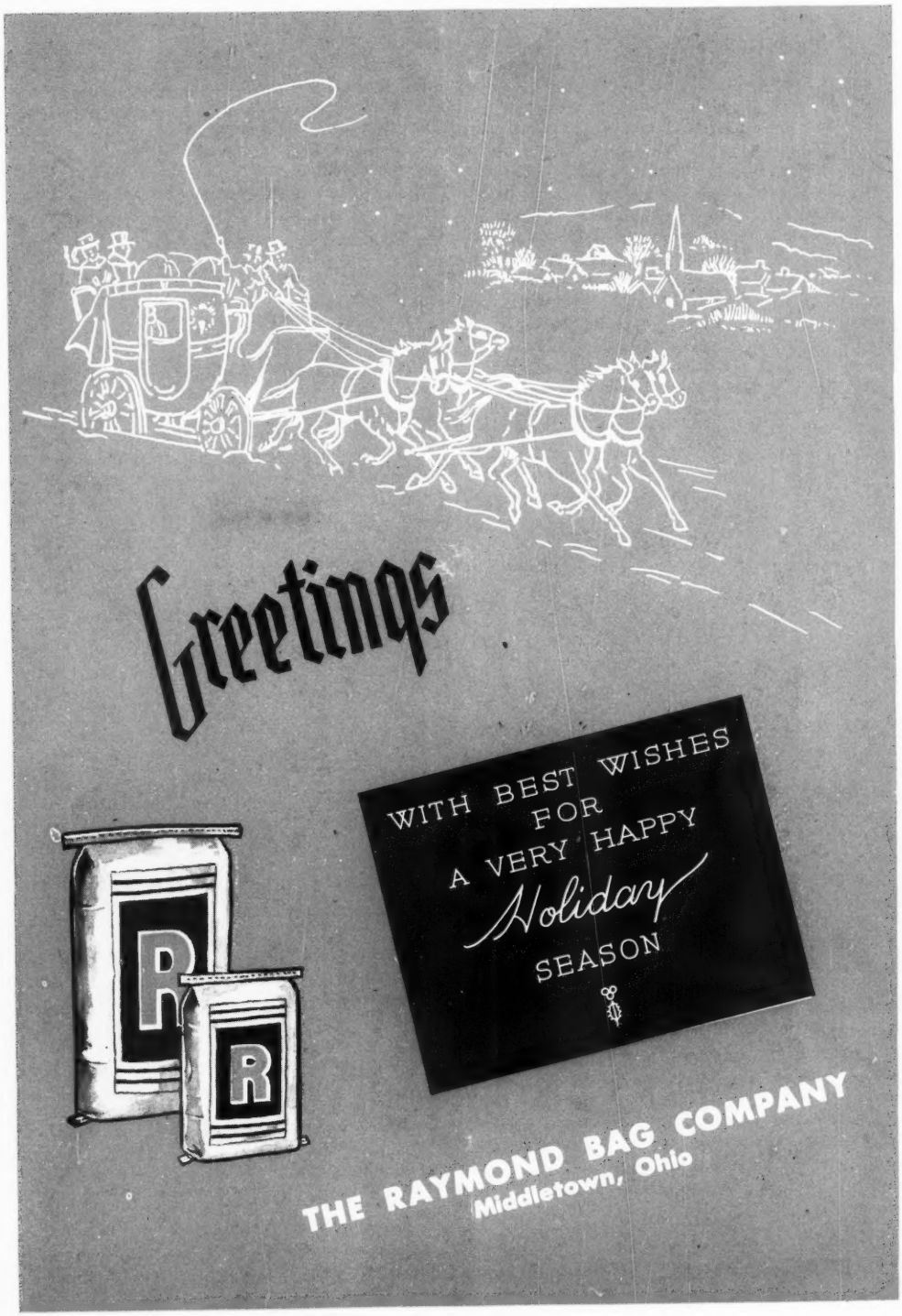
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FOR
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OCTOBER TAX TAG SALES

(Continued from page 14)

In the ten Southern States, cumulative sales were equivalent to 6,297,000 tons; this represented an eight per cent increase over the first ten months of last year. Compared with that period, seven of these States reported increases, with the gains ranging from two per cent for South Carolina to 57 per cent for Oklahoma. The decreases for the remaining three States ranged from one per cent for Virginia to 15 per cent for Florida. On a total tonnage basis for the first ten months of the year, North Carolina leads, with Georgia and Alabama following in that order.

The four Midwestern States, with cumulative sales of 1,633,000 tons, reported a 28 per cent increase over the corresponding period last year. Each of the States showed a gain, the percentage increase for Missouri being the greatest.

Multiwall Bags Prove Efficiency in Ship Fire

New proof of the efficiency of the heavy-duty multiwall paper bag under the most adverse of conditions was recently provided by the experience of a shipment of ammonium sulphate on the Swedish motorship *Axel Salen*

On sailing recently with a cargo of cotton goods, sodium phosphate and sulphate of ammonia for the Orient, fire broke out on the *Axel Salen* just out of Baltimore. In the process of extinguishing the fire, hold No. 3, which contained approximately 550 tons of sulphate of ammonia packed in St. Regis Paper Company multiwall bags, was completely inundated for many hours.

Mr. W. Webster Whittington of the Acme Guano Co., who handled the export packaging for Nitrogen Products, Inc. informed an official of the St. Regis Paper Company that 80 per cent of the sulphate of ammonia was salvaged.

Credit for the substantial salvage possible was given by Mr. Whittington to the multiwall bag. He stated that it would have been impossible to salvage any of the material in the hold if it had been packed in burlap or in bulk, since the water which flooded into the hold would have completely dissolved the material.

The multiwall bag furnished Nitrogen Products, Inc. for this shipment was constructed of two 90-pound basis weight asphalt laminated sheets, three 50-pound natural kraft sheets and one 60-pound wet strength kraft paper sheet.

An outstanding feature of the salvage operation was the fact that the bags were removed from the hold very largely intact and placed on lighters beside the ship. The material was sold from these lighters.

In these days of nitrogen shortage, the recovery of this quantity of sulphate of ammonia has more than ordinary significance.

N. F. A. FALL MEETING

(Continued from page 8)

over the past 95 years show that during this entire period the plot which received 1,392 pounds of fertilizer annually outyielded the plot receiving 15.7 tons of manure annually. The speaker commented also on the lack of dependable evidence to support claims of certain intangible values such as, that manured plants have hidden qualities that make them superior for human consumption. He said, however, that in some cases fertilizers are being substituted for good farm management and urged that the fertilizer industry give special attention to such factors as sod crops and erosion control.

The next speaker was Gordon A. Clapp, chairman of the board, Tennessee Valley Authority, Knoxville, Tenn. Discussions of matters of common interest with NFA during the past year have left the TVA with the conviction that important areas of activity exist for constructive relationships that would advance the public interest. Mr. Clapp made it clear, however, that TVA does not intend "to withdraw TVA ammonium nitrate from farmer-controlled distribution channels and transfer it" to the fertilizer industry. TVA believes that "such a change would add nothing to and might subtract much" from its ability to help in the improvement of

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agriculture and might not "even serve the long-run interest of the fertilizer industry."

"The problems on which TVA is working at Muscle Shoals are your problems and the nation's problems. They are problems that involve the future of the nation's agriculture and the security and survival of our people.

"Here then I think is where we find a natural and hopeful ground for agreement and cooperation with your industry. For its part the TVA is wholly committed to a cooperative policy with industry, with farmers, and with other agencies of Government."

The closing address was delivered by Dr. C. C. Murray, director of the Georgia Agricultural Experiment Station, Experiment, Ga. Speaking on the need for more adequate pasture fertilization, Dr. Murray pointed out that fertilizer and lime in liberal quantities constitute the major factors making for a new, successful, and profitable livestock enterprise in the Southeast. The main requirements, in addition to lime, are nitrogen, phosphate, and potash. However, the need for the minor elements in an adequate fertilizer program for pastures in certain parts of the South cannot be overlooked. Farmers find that, as a result of applying fertilizer, their pastures become more productive and more nutritious. Broomsedge, running briars and weeds disappear, and in their place are found white clover, bluegrass, and other desirable species of plants.

"June grazing in January" in the South is now a reality. As a three-year average, the net return from a well-fertilized winter pasture was well above that from similar areas which had received no fertilizer. Milk from cows pastured during the winter contained 232 per cent more carotene and 81 per cent more vitamin A than did milk received from barnfed cows. The milk from the pastured cows is of superior nutritional value to the consumer.

THE FERTILIZER SITUATION

(Continued from page 10)

duction is as high as is economically and agronomically sound, considering the supply and cost of the raw materials available, efforts should continue to be made to attain that goal. Progress in the production of fertilizer distributing machines permits the more accurate placement of specified quantities of fertilizer and reduces the danger of the use of concentrated mixtures. Increasing freight rates make the unit transportation cost more and more vital. Increased knowledge of the consumer as to the proper methods of fertilizer use has tended to reduce purchaser resistance to higher grade goods. For these and other valid reasons the industry should make every effort to have higher analysis goods used in the interest of furnishing the farmer his plant food at the lowest possible cost in view of the materials that are available for use.

Freight Rates

On July 27, 1948, the temporary increases in freight rates in effect under Ex Parte 166 were made permanent by an order of the Interstate Commerce Commission. We were successful in having maximum increases placed on fertilizers and fertilizer materials and on phosphate rock. Further petitions requesting a reduction in these ceilings resulted in a reduction of one cent a hundred pounds on the phosphate rock rate but no reduction on the other items. The rail carriers have now filed a new request for a 13 per cent increase in rates on practically all commodities, including fertilizers, fertilizer materials, phosphate rock and sulphur, with no provisions for any ceilings. Such a further increase would on the average probably increase the cost of a ton of fertilizer deliv-

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	Ammonium Nitrate %	Anhydrous Ammonia %	Water %	Total Nitrogen %	Nitrate Nitrogen %	Ammonia Nitrogen %
SPENSOL A	65.0	21.7	13.3	40.6	11.37	29.22
SPENSOL B	55.5	26.0	18.5	40.8	9.71	31.10
SPENSOL C	66.8	16.6	16.6	37.0	11.69	25.34

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ered to the farm from 75 cents to a dollar over and above the several dollars a ton due to recent increases already granted. Our Association will protest such further increases on our products. The rail carriers already collect multiple rates on fertilizers in the shape of incoming charges on raw materials and outgoing charges on finished goods. In addition a ton of fertilizer produces greatly increased potential tonnage for the carriers in the form of extra crops and other farm products marketed, which are the direct response to the use of fertilizers.

Cooperation in Fertilizer Research

Our Association never loses sight of its constructive over-all job to promote the use of the right kinds of fertilizer in the right amounts in the right way. In so doing staff members are continuing to maintain close and friendly contacts with State and Federal officials and agricultural scientists having to do with fertilizer, both in their individual work and where they meet for discussion of common problems. Recently staff members have attended meetings of such organizations as the American Society of Agronomy, the American Chemical Society, the American Society for Horticultural Science, the American Society for the Advancement of Science, the Vegetable Growers Association of America, and the Association of Official Agricultural Chemists, as well as the Maine Fertilizer Conference, the New Jersey Fertilizer Conference, and fertilizer field days and conferences in Virginia, North Carolina and South Carolina.

Another organization that deserves special mention because of the real service it is rendering is the National Joint Committee on Fertilizer Application. Organized twenty-three years ago, it is composed of representatives of the American Society of Agricultural Engineers, the American Society of Agronomy, the American Society for Horticultural Science, the Farm Equipment Institute, the National Canners Association, and The National Fertilizer Association. In 1938 it issued recommendations on Methods of Applying Fertilizer. A second publication bringing these recommendations up to date is now under way and our staff has assumed the responsibility of seeing it through the press and making it ready for distribution.

All members of the fertilizer industry are keenly interested in the studies now being made by the U. S. Department of Agriculture, in cooperation with a number of State experiment stations, with respect to radioactivity. For about two years experiments, originally sponsored and financed by fertilizer manufacturers, have been under way in which radioactive phosphorus has been used as a tool to trace the behavior of phosphorus in the soil, in fertilizers, and in plants. This year a series of experiments was inaugurated to study the effects on plant productivity of radioactive materials placed in the soil. It is expected that reports on both these studies will be made public in the near future.

Future Fertilizer Consumption

Any thinking about the outlook for fertilizer consumption in the future must, of course, take into consideration some factors which cannot now be evaluated with certainty. However, a glance at the field may be of interest.

It is a well-known historical fact that under normal conditions farm income is the most important factor in determining the amount of fertilizer that will be used by American farmers. Among others, our own Association has made a substantial contribution to this subject through the publication of an illuminating study in 1939. Normally fertilizer consumption follows farm income up and down.

Factors affecting farm income include, of course, the U. S. D. A. price support program. The emergency program will expire on December 31, 1948, but, under the Agricultural Act of 1948, will be succeeded immediately by a temporary program for 1949 and then by a permanent program for subsequent years. I would not have time now to give you details regarding these programs—even if I could. The significant thing about this whole matter is that the Congress has again gone on record and has established price support for farm products as a permanent part of our agricultural economy.

Another important factor in the crop production picture, and hence in the fertilizer

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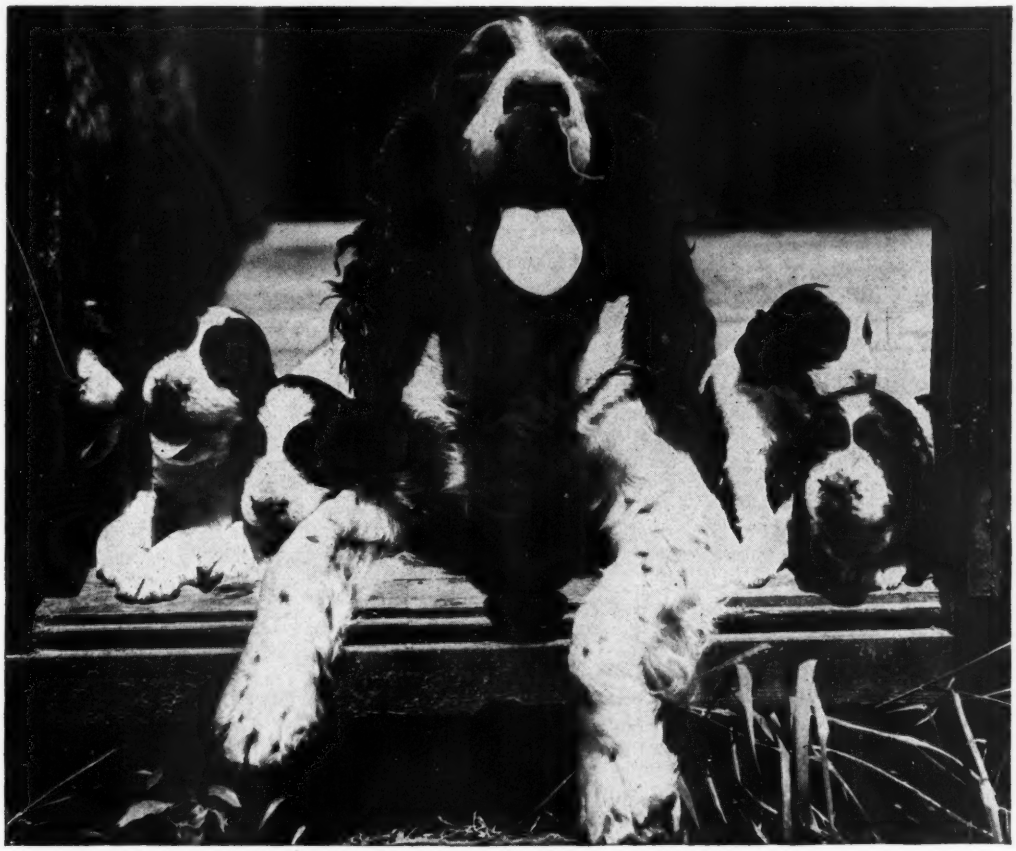

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consumption picture, is the extraordinary demand for farm products which we have had during the past few years. Again there is uncertainty, but it would seem safe to assume that until war-devastated countries again become self-supporting so far as their food supply is concerned, or much more nearly so than they now are, sharp demand for American agricultural products will continue.

I should feel remiss if I lost this opportunity of emphasizing what I conceive to be the most important angle in fertilizer salesmanship. We offer a product which should sell itself if we give it a fair chance. In the fertilizer business we can proudly stand on results and so proclaim to potential buyers, one and all. I know of no commodity bought and used by farmers which brings them bigger returns on their investment than fertilizer. In 1939, in a survey conducted by the Association 32,000 farmers gave us their individual opinion as to whether it paid them to use fertilizer. Their composite opinion was that for each dollar spent for fertilizer they received a return of $3.60 in crop increase. At the present time the rise in prices received by farmers for all farm products (the index being about 290) and the current fertilizer prices (the index being about 155) being taken into consideration, the farmer is apparently receiving $8 in crop value for each dollar invested in fertilizer. This means that, on the average, if a farmer puts $5 worth of fertilizer on an acre of land he can expect a return of additional crops worth $40.

In conclusion, I especially wish to compliment the fine work done by the entire staff, particularly during the last several months.

I want to assure you it is an honor and a privilege to share in the teamwork with you in developing a better agriculture, a better America, and a Better Tomorrow for Everybody.

BROADENING THE FERTILIZER MARKET

(Continued from page 11)

Certainly the Midwestern and Western regions, previously considered frontiers by the fertilizer industry, offer unlimited potentialities in broadening the fertilizer market.

The South Atlantic and South Central areas have always been the chief fertilizer market in America. As recently as the 1935-1939 period these areas used 69 per cent of the fertilizer consumed in this country; and although they used only 58 per cent in 1947, they actually increased their tonnage from five million tons in the 1935–1939 period to 8.6 million tons in 1947, which represents more than the average prewar consumption for the entire country.

New Techniques

A further broadening of the fertilizer market will doubtless come through the application of new techniques to well-established agricultural commodities. In discussing this broad prospective field of fertilizer usage with you, I would like to present a few fields of development which challenge the imagination and best resources of farmers and members of the fertilizer industry.

In the South, a region previously considered mature in its usage of fertilizer, rapid progress is being made in the efficient production of certain agricultural commodities. In cotton, for example, average yields are at record levels. In tobacco, sugar cane, rice, oats and hay, to name a few, similar progress has been made. Certainly the application of new techniques to these row crops will demand increased per acre applications of fertilizers.

Let us consider briefly new techniques in Southern corn production, and their potentialities in the fertilizer field. During the past five years research has found that through use of adapted hybrids, doubling or

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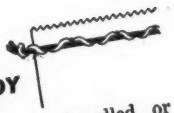

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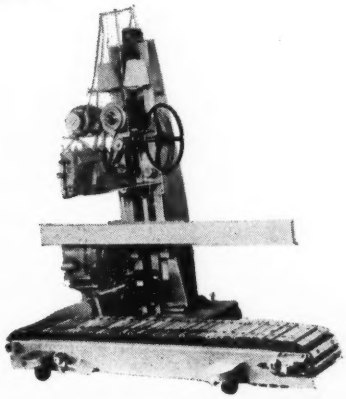

E-1 BAGPAKER
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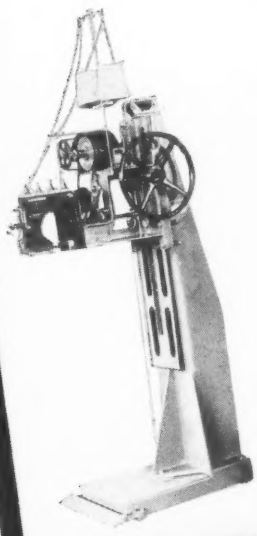

F-1 BAGPAKER
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tripling the customary stand of corn, and applying fertilizer in large quantities, the yield under normal weather conditions can be increased to really high proportions. Thousands of farmers all over the South are pioneering in introducing these practices, and are securing yields ranging from 40 bushels to more than 100 bushels per acre.

How can this new technique affect fertilizer consumption? There are more than twenty million acres of corn in the Southeast, producing an average of about 16 bushels per acre. It would take a brave man indeed even to hazard a guess as to the time when all of these acres will be fertilized and managed for proper efficient production, but the potential fertilizer market is something like ten million tons annually in this field alone. This area could treble its present corn production by proper fertilization and management or, if more desirable, produce the same amount of corn on one-third the present acreage. Southern corn production offers a definite potential in the fertilizer market—another significant change affecting the fertilizer industry.

Fertilizer for Pastures

Perhaps the greatest potential use for fertilizer in this area lies in the production of feed, particularly pastures, for livestock. Progress in this field has been slow at best and it is only in recent years that research workers have established a really firm foundation for livestock production in the South. These findings suggest, in brief, that pastures must be cared for as commercial crops are cared for, by proper land preparation, seeding, fertilization and management. Through use of this formula, highly productive pastures have been established all over the South. Winter grazing plats show the kind of winter feed which can be produced with proper fertilization. The establishment of spring and summer pastures also calls for more and more fertilizer.

There are some forty million acres of open pastureland in the humid section of the South alone in which these practices are applicable. I would hesitate to predict how much fertilizer is needed on this acreage but you can see that the potentialities are almost unlimited.

The Southeastern area and certain crops grown in this region have been used merely as examples. This is the area with which I am personally most familiar. Other areas offer similar possibilities for expanding fertilizer consumption.

These optimistic conjectures are based primarily on an assumption of the continuation of a variety of factors which encourage maximum effort on the part of the farmers. Fertilizer usage will depend to a large extent in the future, as it has done in the past, on the general level of prosperity throughout the United States. Farmers primarily are business men and will engage in those practices which yeild them profit.

If the demand for farm products and farm prices remain high, there is every reason to believe that the demand for fertilizers will continue to increase. If on the other hand the demand for farm commodities is reduced, the farmer can produce most economically only by reducing his acreage and increasing his per acre production through increased fertilizer application. If the farmer can be taught this fact, then the relative position of the fertilizer industry is good, regardless of economic conditions.

Frankly, I believe that the fertilizer market has been broadened on a permanent base and, if the industry remains vigilant, it will continue to contribute its vital part to the agriculture of our country, and at the same time keep itself on a sound economic basis.

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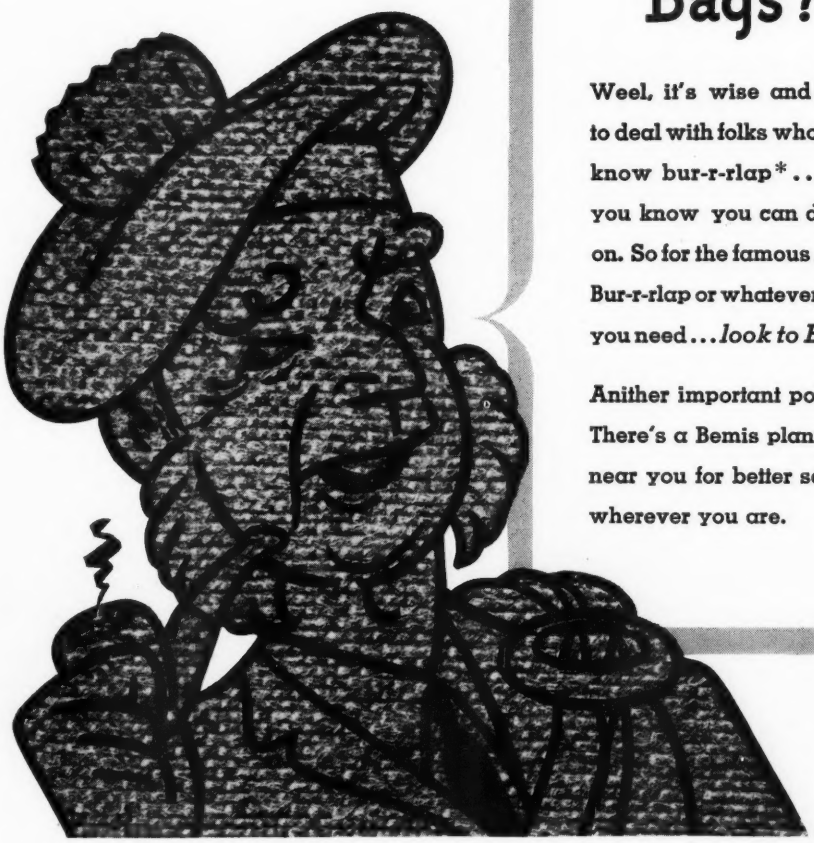

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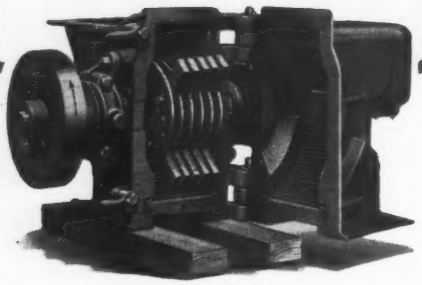

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For an Alphabetical List of all the Advertisers, see page 33

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Atlanta Utility Works, The, East Point, Ga.
Monarch Mfg. Works, Inc., Philadelphia, Pa.

Alphabetical List of Advertisers

American Agricultural Chemical Co., New York City.... 4
American Potash and Chemical Corp., New York City....17
Arkansas Rice Growers Coop. Assn., Stuttgart, Ark. 21
Armour Fertilizer Works, Atlanta, Ga....—
Ashcraft-Wilkinson Co., Atlanta, Ga....Front Cover
Atlanta Utility Works, The, East Point, Ga....26
Baker & Bro., H. J., New York City....—
Baughman Mfg. Co., Jerseyville, Ill....—
Bemis Bro. Bag Co., St. Louis, Mo....3, 29
Bradley Pulverizer Co., Allentown, Pa....—
Chase Bag Co., Chicago, Ill....6
Chemical Construction Corp., New York City....—
Commercial Solvents Corp., Agricultural Div., New York City....—
Davidson Commission Co., The, Chicago Ill....22
Davison Chemical Corp, The, Baltimore, Md....—
Fulton Bag & Cotton Mills, Atlanta, Ga....25
Gascoyne & Co., Inc., Baltimore, Md....34
Hammond Bag & Paper Co., Wellsburg, W. Va....—
Hayward Company, The, New York City....34
Hough Co., The Frank G., Libertyville, Ill....—
Huber Co., L. W. New York City....26
International Minerals & Chemical Corporation, Chicago, Ill....Back Cover
International Paper Co., Bagpak Div., New York City....27
Jaite Company, The Jaite, Ohio....16
Jackle, Frank R., New York City....14
Keener Mfg. Co., Lancaster, Pa....34
Keim, Samuel D., Philadelphia, Pa....33
Kent Mill Co., Brooklyn, Ny....24
Link Belt Company, Chicago....—
Lion Oil Company, El Dorado, Ark....—
McIver & Son, Alex. M., Charleston, S. C....30
Monarch Mfg. Works, Inc., Philadelphia, Pa....34
Potash Co. of America, New York City....3rd Cover
Raymond Bag Co., Middletown, Ohio....19
Sackett & Sons Co., The A. J., Baltimore, Md....28
Schmutz Mfg. Co., Louisville, Ky....5
Shuey & Company, Inc., Savannah, Ga....34
Southern Lead Burning Co. Atlanta, Ga....—
Southern States Phosphate & Fertilizer Co., Savannah, Ga....28
Spencer Chemical Co., Kansas City, Mo....23
Stedman's Foundry and Machine Works, Aurora, Ind....20
St. Regis Paper Co., New York City....—
Sturtevant Mill Co., Boston, Mass....30
Tennessee Corporation, Atlanta, Ga....—
Texas Gulf Sulphur Co., New York City....—
Titlestad Corporation, Nicolay, New York City....—
Union Special Machine Co., Chicago, Ill....—
U. S. Phosphoric Products Division, Tennessee Corp., Tampa, Fla....30
United States Potash Co., New York City..2nd Cover
Virginia-Carolina Chemical Corp., Richmond, Va...—
Wiley & Company, Inc., Baltimore, Md....34
Woodward & Dickerson Inc., Philadelphia, Pa....18

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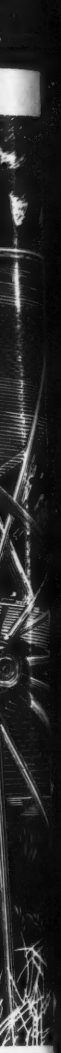
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